REMARKS RE: CLAIMS

ITEM 1: Applicant's election with traverse of claims 6-9 in the reply filed on July 1, 2004 is acknowledged.

ITEM 2: Claims 1-5 and 10 are withdrawn from further consideration pursuant to 37 CFR § 1.142(b), as being drawn to a nonelected claims, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on July 1, 2004.

ITEM 3: Previous claims 6-9, and new claims 11-29 are presented herein for examination.

New independent claim 11, without limiting the scope of the claimed invention, is principally directed to a transportable power conversion module as shown in Figs. 2, 2B, 10, 11, 13, and 13A that adjusts a reference voltage based on sampled battery voltage.

Without limiting the scope of the claimed invention, new independent claim 23 is principally drawn to a modular apparatus in the conformation of a battery pack that adjusts a reference voltage, as depicted in Figs. 2, 2B, and 10.

New independent claim 24 is, without limiting the scope of the claimed invention, principally directed to a transportable intermediate module that adjusts a reference voltage based on sampled battery voltage, as shown in Figs. 2, 2B, and 11.

Without limiting the scope of the claimed invention, new independent claim 25 is principally drawn to a system having an embedded apparatus that adjusts a reference voltage, as depicted in Figs. 2, and 2B.

Claim Rejections – 35 USC § 103

ITEMS 4-6: Claims 6 and 9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Imagawa (U.S. Patent No. 5,387,820) and Fujishima (U.S. Patent No. 5,283,762).

Even though the following reasoned arguments by applicant are sufficient to overcome the rejection, applicant herein amends subject claim 6 to now recite "a previously undetermined battery-powered device" in lines 1-2. Further, lines 3-4 of the claim are herein amended to recite "the previously undetermined battery associated with said powered device." The amended claim now more clearly and distinctly distinguishes applicant's claimed invention from the teachings of either/both Imagawa or/and Fujishima.

Prior Art Solves Different Problems

Even without the above changes to the subject claim, and so as to better put into context applicant's following reasoned arguments, a comparison of the cited prior art to applicant's claimed invention shows significant differences in the problems being solved.

Imagawa solves the problem of excessive power consumption of a battery in a device which has both a low-voltage and a high-voltage internal circuit (Col. 1, lines 10-38), with the anticipated result that "the life time of the battery can be extended" (Col. 2, lines 1-2).

Fujishima teaches a possible solution that is specific to "a degradation of a transistor characteristic" (Col. 1, lines 29-30) caused by "a problem in the change of a power supply voltage" (Col. 1, lines 38-39).

Applicant's claimed invention, even as claim 6 was originally presented, recites a solution to a very different problem: "selecting and applying a proper operating voltage for a powered device."

Applicant points out these distinct differences in the problems being solved as relating to the allegation in Item 6 of the Office Action that " It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Imagawa and Fujishima because they both teach a system having a plurality of power supply voltages. Fujishima's teaching of selecting one of a plurality of reference voltage values depends on power supply voltage would increase the integrity of Imagawa system by allowing a proper power supply voltage to be provided to the system."

As are apparent, the problems being solved, and the field of invention, scope, and subject matter of the prior art -- individually, or in combination -- point to "those being skilled in the art" of either/both "degradation of a transistor" and/or "battery-power conservation" to have relied at all on either Imagawa and/or Fujishima in a manner that would then anticipate applicant's solution to a totally different problem, and applicant recites the problem in the subject claim. Therefore, the Office Action's allegation that the teachings of Imagawa and Fujishima be combined because they both teach a system having a plurality of power supply voltages does not, in and of itself, support the concept of analogous inventions. Imagawa's battery conservation teachings come from an entirely different technical field than Fujishima's degradation of a transistor's characteristics. Further, Fujishima's technical field is not at all analogous to that of applicant's claimed invention. Since Fujishima does not even cite a battery in his description, it would be highly unlikely that one skilled in the art of Imagawa's conservation of battery power would look to Fujishima's invention as analogous or even relevant art.

Further, there is nothing implicit or even suggested in either of the prior arts that they be combined at all, especially in the way stated in the Office Action.

Different Methodologies Based On Predetermined Features

Applicant's response is prefaced here on the underlying differences in methodologies employed by the prior art, as are relevant to applicant's claimed invention. The distinctly different problem-solving methodologies lead directly to the significant differences in physical features pointed out herein that distinguish applicant's claimed invention from the prior art.

The inventions of both Imagawa and Fujishima rely on rule-based logic. Their rule-based methodologies require that the prior arts' devices be predetermined. Imagawa, in the references cited in the Office Action, requires a pre-known battery as a power source, as well as a predetermined device having specific low- and high-voltage circuits. This is obvious in the cited Fig. 6 of Imagawa, which clearly and repeatedly identifies "predetermined" reference voltages of the apparatus as 1.0V, 1.2V, and 1.3V (Col. 2, line 37 - Col. 3, line 6, Col. 3, lines 28-43, and Col. 4, lines 17-19). Because all elements of

the prior art's invention are previously known and fully anticipated, for purposes of comparison, Imagawa's methodology might be reducible to simple rules based Boolean statements, such as:

IF Vbatt => 1.0V, THEN OUTPUT = Vout1, OR

IF Vbatt => 1.2V, THEN OUPUT = Vout2, OR

IF Vstepup => 1.8V, THEN OUPUT = Vout3

These three statements are based on voltage values in Col. 4, lines 14-19. Note that, unlike the first and second states above which are based on predetermined voltages of Imagawa's battery, his third statement represents a voltage value from sampling "the output of the step up circuit," and not the "sampled battery voltage" as erroneously alleged in the Office Action. Thus, applicant's claimed "means of comparing said sampled battery voltage and said reference voltage" is not analogous to the teachings of Imagawa, as the subject claim does not point to any sampling of a step up circuit.

Applicant's claimed invention is non-predeterministic. Neither the battery, not its associated powered device are previously known to the apparatus of claim 6. The results achieved by applicant's claimed invention are new, and blaze a new trail that provides new functionality and cost savings over prior device-specific dedicated power-delivery products.

To draw a parallel according to the different methodologies that distinguish between Imagawa teachings and applicant's claimed invention, applicant's methodology as expressed in a comparable Boolean statement might read:

IF Vbatt = (%^{1}), THEN Vout = (%^{2})

It is the two variables in applicant's oversimplified Boolean statement that are pivotal differentiators, when compared to Imagawa's previous Boolean statements that express fully predetermined voltage values.

The number of applicant's indicated output voltages is acknowledged in the Description to be variable, dictated primarily by the various methodologies one skilled in the art would use to define the final number of output voltages. For example, the section

of applicant's Description titled "Point-Count vs. Actual-Value Software Schemas," recites that the "use of point-counts and Boolean variables" can alter the number and granularity of output voltages of the claimed invention (Page 70). Thus, while the selector dial 337 in applicant's Fig. 13-1 may suggest only a dozen output voltages, the Description clearly explains that variables such as using a more granular A/D converter, combining point count and real-value methodologies, as well as increasing the number of resistors in the resistor ladder of the power supply results in a "power supply that offers more granular voltages" and "software 101 [that] can be more accurate" (Page 71, lines 15-16). Thus, applicant's claimed invention is not, as are Imagawa's and Fujishima's inventions, predeterministic and based on any limited number of predefined output voltages.

As an interesting comparison, Imagawa's teachings use the term "predetermined" or equivalents some eight times in the four columns of his Specification. Fujishima uses the term "predetermined" to describe various elements of his invention over 50 times. By comparison, applicant recites "predetermined" only once, in a context of a predetermined load being applied to a battery but, even in this reference, there is a variable condition of "only if the resistive value of the battery pack's internal wiring is known" (Page 120, lines 6-12).

Attempting to combine Fujishima's teachings with those of Imagawa, as suggested in the Office Action, does not cause either/both of the prior arts to read on applicant's claimed invention. Fujishima, like Imagawa, also relies on a methodology based on predetermined elements of his apparatus. His Fig. 1, as cited in the Office Action, is essentially identical to the previously discussed Fig. 6 of Imagawa, in that both clearly define predetermined operational voltages of their devices, with Fujishima's preset output voltages at 3.3V, 2.8V, 2.8V, and 5.5V. Expressing Fujishima's teachings in simplified Boolean statements as applied to the prior art's predetermined voltages results in:

IF Vref = +/-3.3V, THEN OUTPUT = Vout1, OR

IF Vref = +/-2.8V, THEN OUPUT = Vout2, OR

IF Vbatt = +/-3.8V, THEN OUTPUT = Vout3, OR

IF Vbatt = +/-5.5V, THEN OUTPUT = Vout4

This is not substantially different from Imagawa, especially since Fujishima's Description defines each of these voltages as "a predetermined reference voltage" (Col. 6, lines 3-4). Each predefined reference voltage represents a system state, such as "normal use" of the device (Col. 6, lines 3-4), or a predefined "Vbump test" which fluctuates the voltage (Col. 5, lines 33-36), or a predetermined "aging test" which requires a high voltage (Col. 6, lines 51-65).

"Adjusting" Doesn't Improve Imagawa

The assertion in the Office Action that Fujishima's "plurality of power supply voltages" serves to overcome the shortcoming of Imagawa not teaching a "means for adjusting" applicant's "reference voltage and selecting a value of said reference voltage that most closely matches the battery voltage" is to misunderstand several key points.

Imagawa is not teaching applicant's method of matching his apparatus' output power signal to his battery's voltage but, instead, is teaching how changes in the battery's voltage (as a function of lost battery capacity) can be compensated for by switching from one predetermined output voltage to another in order to conserve battery power. Specifically, the prior art repeatedly teaches that battery voltage is always decreasing, resulting in the apparatus switching between its low level state and its high level states:

> "Switching of the power sources from the battery to the output of the step up circuit 16 enables both the low and high voltage circuits 13 and 15 to work until the battery voltage falls to near the minimum operative voltage of the step up circuit even if the battery voltage is not higher than 1.0 volt and enables the life time of the battery to be extended" (Col. 3, lines 49-55).

Further, contrary to what the Office Action suggests, Imagawa's teachings would not be improved by combining Fujishima in order to achieve an "adjusting" of reference voltage by applicant's means that "most closely matches the battery voltage." In the example just cited here, for Imagawa to adjust his reference voltage to 1.0V -- the voltage

of a virtually depleted battery -- would result in an inoperable invention with the DC/DC converter in Fig 6 outputting 1.0V, instead of the requisite 1.3V. Thus, the Office Action relies on an premise and references thereto that are not supported by the prior art references.

The Office Action further alleges that Fujishima should be combined with Imagawa because "Fujishima's teaching of selecting one of a plurality of reference voltage values depends on power supply voltage would increase the integrity of Imagawa [sic] system by allowing a proper power supply voltage to be provided to the system." In actuality, Imagawa already does teach selecting a reference voltage that depends on power supply voltage. His "high voltage circuit system is operative when the output of the step up circuit [the DC/DC power supply of Fig. 6] is 1.3 volts or higher. An intermediate voltage circuit system is operative at the voltage of 1.2 volts or higher" (Col. 4, lines 14-18). Thus, the assumption in the Office Action that Fujishima should be combined with Imagawa, because Imagawa does not teach reference voltage values that depend on power supply voltages, is not convincing as to why the prior art should be combined.

Specific Responses To The Office Action

Such differentiators as previously discussed will become more obvious in applicant's following reasoned arguments as to the specific unique features that distinguish the claimed invention from the prior art.

The Office Action acknowledges that "Imagawa does not explicitly teach" applicant's adjusting a reference voltage that most closely matches said sampled battery voltage. By doing so, it is stipulated that Imagawa lacks this element of applicant's claimed invention. As such, the rejection of subject claim 6 specifically on the basis of Imagawa is overcome because the prior art does not read on or anticipate this key feature of applicant's claimed invention.

The Office Action alleges that Imagawa teaches a means of sampling battery voltage of a battery associated with said powered device, and cites the prior art: "At the time t1 when the circuits in the present apparatus have been stable, the voltage detecting circuit

compares the battery voltage with a reference voltage. . ."(Col. 4, lines 31-32). This fragmentary reference may seem at least superficially relevant because it assumes that the battery voltage being compared was acquired by sampling a battery. However, it has already been shown previously herein that Imagawa also samples power supply voltages for activating both his intermediate and high level circuits. The prior art only samples battery for his low level circuit state. Thus, by focusing on Imagawa's sampling of battery voltage, to the exclusion of his sampling power supply voltages, results in a strained interpretation of Imagawa as anticipating applicant's claimed invention.

When put into context, the above-cited fragmentary reference to Imagawa sampling battery voltage takes on a different interpretation, as the cited text continues ". . .in response to the determination timing signal for changing its output if the reference voltage is higher than the battery voltage" (Col. 4, lines 33-35). When presented in its entirety, the relied on reference does not anticipate the subject battery sampling clause in claim 6, because not only does applicant's claimed invention not recite a "timing signal," but also applicant's comparing is not limited to a specific condition or state wherein the reference voltage must be higher than the battery voltage in order to change the output voltage.

Fujishima's Reference Oscillator Does Not Provide Reference Voltages

The Office Action goes on to cite the voltage outputted from Imagawa's reference oscillator (Col. 3, lines 63-66; Col. 4, line 33) as anticipating applicant's claimed "means for providing a reference voltage." The previous discussion about the text in line 33 of Col. 4 has already been discussed, except that a "timing signal" -- not any reference voltage -- is generated by the reference oscillator. Lines 63-66 of Col. 3 do not describe Imagawa's reference oscillator performing any other functions than receiving "necessary signal data for a period of time from t3 to t5 and generates an operation timing signal for controlling the operation of the apparatus from t0 to t6, a reset timing signal for resetting the data of a hold circuit from t0 to tl and a timing signal for determining the switching of power sources from tl to t2." Nothing in the cited reference constitutes a means for providing a reference voltage. Instead, the reference relied upon only serves to

reinforce applicant's original argument that Imagawa's reference voltages are predetermined, and that the prior art does not teach a system that includes a *bona fide* means of providing a reference voltage.

To further make this crucial point that Imagawa's reference voltages are predetermined, and not at all the same as any of applicant's claimed "means for providing a reference voltage," the prior are teaches that:

> "The circuit which is operative at a voltage within a *predetermined* range not less than, for example, 1 volt of the power source is connected with the low voltage circuit system 6 when the power supply voltage is limited to only a single battery cell of 1.5 volts. A circuit which operates at a voltage within a *predetermined* range not less than, for example, 1.3 volts is connected with the high voltage circuit system 8. The voltage detection circuit 10 *compares the battery voltage with an inner reference voltage of 1.3 volts* and connects the battery 5 with the high voltage circuit system 8 by the switching circuit 7 when the battery voltage is 1.3 volts and higher [applicant's emphases]" (Col. 2, lines 37-49).

Compare Imagawa's teachings to a non-limiting example of applicant's means of providing a reference voltage after sampling a battery voltage of a battery. In Fig. 1-1, the battery voltage is sampled in step 642 (Vmax). The sampled voltage value is still a variable at this point, and must still be qualified as a valid reference voltage. Upon retrieving this stored value in step 660, look up tables are accessed and a computation is performed in steps 662 and 664 to determine if the previously acquired value is valid. If the acquired no-load value matches a possible combination of cells configured into a battery cluster (cell pack), the resulting value is then accepted and stored in local memory as a reference voltage ($Vref^2$).

The system then applies a load to the battery in step 670 and stores that acquired value (Vmin) in a memory area 678. The look up tables and computations are once again repeated to qualify the Vmax value as a valid

reference voltage and, once validated, the result is stored in memory as ($Vref^1$). After this initial sampling and validating the sampled voltage values, further available methodologies are available, including but not limited to look up tables and computations, to provide a final reference voltage.

This comparison of one of applicant's means of providing a reference voltage to Imagawa's predetermined inner reference voltage serves to clearly distinguish applicant's claimed invention over the prior art.

"The Absence of a Battery"

The Office Action also presents a concept that Imagawa anticipates applicant's claimed "means for powering said powered device from a power source having an output voltage equal to said selected value of said reference voltage in the absence of a battery connected to said powered device." This concept is allegedly supported in Col. 4, lines 35-38 of the prior art, which teaches that "The changed state is held by the hold circuit so that the power supply circuit switches power sources for the high voltage circuit system to a DC/DC converter from the battery."

Although the battery of the prior art is inactive during the time that his DC/DC converter is required to operate as a "voltage step up circuit," the prior art's power source does not have a voltage equal to the reference voltage. In lines 7-8 of the subject claim, the selected value of the reference voltage most closely matches the sampled battery voltage. In a state wherein the battery is absent of lines 10-11, Imagawa's power source (DC/DC converter for the high voltage circuit) is supposed to have an output equal to the previously recited reference voltage that most closely matches the sampled battery voltage. Put more simply, Imagawa's DC/DC converter should, according to the Office Action, output his sampled battery voltage.

In actuality, in the prior art reference previously discussed wherein the sampled battery voltage is 1.0V, when Imagawa's device is expected to be in a state which requires his high-voltage circuit to be active, his DC/DC converter outputs 1.3V (or 1.2V if the "intermediate" voltage circuit is called for). To fully anticipate applicant's claim,

the prior art's DC/DC power supply would have to output only the sampled battery voltage (1.0V), in order to satisfy the claim's limitation of an outputting a "reference voltage that most closely matches said sampled battery voltage" (lines 7-8).

This example points to different physical aspects of applicant's claimed invention in comparison to Imagawa. Imagawa's battery is the primary power source for his device, and his system repeatedly samples battery voltage according to a preset timing signal. The prior art also relies on multiple reference voltages, requiring at least two (but preferably also a third intermediate reference voltage) to properly operate the device. The prior art's DC/DC power supply is required only in limited situations, such as the example of a nearly depleted battery.

By comparison, applicant's power supply is the primary power supply for the device, and the system only samples battery voltage during an initial set up in order to establish a basis for a single final reference voltage that is then used by the power supply throughout the powering of the device. Applicant's battery is never active again, unless required as backup for recovering from some highly improbable failure of the apparatus.

To cite an extreme example that clearly shows the claimed invention's superiority over the prior art, applicant's system can operate in a true absence of battery mode. Once the brief initial battery sampling process is concluded, a user can physically remove the battery from the device, providing that the electrical coupling between the power supply and the device was kept intact. In the section titled "Hybrids" of applicant's Description, battery enclosures with only partial cells are discussed. Even more to the point, applicant's Description defines communications links between the system and the device which are used to transfer a valid reference voltage value to a memory at the device (or in a removable power cord), which permanently eliminates any need for the system to sample the battery in the future. In such a modality, the device's battery does not have to be present at all. Instead, simply retrieving the requisite single reference voltage value from a memory area at the device (or in the power cord) eliminates the battery sampling activity entirely. (See the following sections of applicant's Description: "Data Available to Other Systems" (Page 32), "Other Power Supply Modalities" (Page 26), "Castleman

Cords" (Page 33), "Multi-Contact Connectors" (Page 48), and "Two-Line Bi-directional Data" (Page 51).

Such modalities are impossible with Imagawa's invention. His multiple reference voltages and output voltages require that is battery be queried frequently, primarily because the problem he is trying to solve is conserving battery power. His battery can't be removed, because each change of state in his device, e.g., low and high voltage circuits turning on and off, require a battery sampling every time the device's state changes. But, most important to the matter at hand, is that the prior art's reference voltages are predetermined and do not "most closely match" Imagawa's "sampled battery voltages," as the subject claim recites and requires.

Thus, it is clear that Imagawa does not satisfy all the elements of the subject claim, and that applicant has overcome the rejection by proffering this, and other examples that support applicant's position.

Fujishima

Many of the cited references to Fujishima in the detailed Office Action have already been addressed herein, such as the prior art's reference voltages being, as with Imagawa, predetermined, and are previously known operating voltages of the device. Applicant's reference voltage is unique by being arrived at through analysis of battery voltage and other power-related information that was previously unknown to applicant's claimed system. The Office Action attributes Fujishima's reference voltages as dependent on a *power supply* voltage, while applicant's reference voltages are distinguishably unique by being dependent on *battery* voltages, thus further straining the interpretation and comparison of applicant's claimed invention to Fujishima's.

The prior art does not teach any battery whatsoever. It is therefore apparent that Fujishima's invention, of itself, could never anticipate applicant's claimed invention. The term "battery" does not appear even once in the prior art's writings, yet applicant's claim 6 recites a battery four times. In the context of the subject claim, Fujishima teaches no battery sampling; no comparing the sampled battery voltage to his reference voltages; no

adjusting the reference voltage since that requires a reference voltage that most closely matches the sampled battery voltage; and, as has just been discussed regarding Imagawa, Fujishima's invention does not satisfy lines 9-11 of the subject claim, because the output voltage traces back in the claim to the sampled battery voltage.

"Adjusting" vs. "Selecting"

The suggested combining of Fujishima and Imagawa is apparently to close the gap left by Imagawa by his invention not "adjusting" its reference voltages. But, the Office Action attempts to create a connection between the terms "adjusting" and "selecting" when it combines the two in stating that Fujishima teaches a "means for adjusting reference voltage (Vr) and selecting a value of said reference voltage value [that] depends on a power supply voltage. The cited reference only states that: "In the embodiment of FIG. 1, the switching circuit 5 and the switching control circuit 6 constitute selection means. Selection means for selecting one of the plurality of reference voltages is not limited to the structure of FIG. 1" (Col. 10, lines 4-8). This reference does not suggest, yet alone provide an arguable basis for attributing applicant's claimed "adjusting" of a voltage value as related to -- yet alone equivalent to -- Fujishima's "selecting" a voltage value.

As to references in Fujishima's teachings to "adjusting," the term is never used, but the prior art does address changing reference voltages (Vr):

> "The voltage converting circuit 1 of FIG. 1 includes a plurality of reference voltage generating circuits 2a, 2b, 2c, 2d. The circuit structure of each of the reference voltage generating circuits 2a to 2d is the same as the circuit structure of the reference voltage generating circuit 102 shown in FIG. 8. However, the levels of the reference voltages Vr1 to Vr4 supplied respectively from those reference voltage generating circuits 2a to 2d are different. For example, the reference voltage Vr1 supplied from the reference voltage generating circuit 2a is *set to* 3.3 V, and the reference voltage Vr2 supplied from the reference voltage generating circuit 2b is *set to* 2.8 V. The reference voltage Vr3 supplied from the reference

voltage generating circuit 2c is *set to* 3.8 V, and the reference voltage Vr4 supplied from the reference voltage generating circuit 2d is *set to* 5.5 V" [applicant's emphases] (Col. 8, lines 19-34).

It is evident that Fujishima clearly teaches predetermined reference voltages that are set to specific pre-known voltage values. The prior art then addresses how a reference voltage is changed:

"Setting of a reference voltage is conducted by changing the channel length, the channel width or the threshold voltage of P channel MOS transistors 21 to 25. The level of the reference voltage can be also changed by changing the number of P channel MOS transistors connected serially between the power supply terminal 10 and the ground terminal 20" (Col. 8, lines 35-41).

This reference unambiguously confirms applicant's reasoned arguments that Fujishima does not teach an "adjusting" of his reference voltages that could be considered to anticipate the language of the subject claim. Only at the time of manufacture are the prior art's reference voltages adjustable, and to do so requires alteration of components in a circuit. Such a method of adjusting the prior art's reference values is clearly not an anticipation of applicant's claimed invention.

Without limiting the scope of the subject claim, one simple example of applicant's means of adjusting of a voltage value is to add 1 volt to a minimum voltage value (Vmin) that is acquired by applying a known load to a battery. To take such a basic adjusting method and suggest that it was anticipated by prior art that teaches no battery from which to acquire a voltage value (instead substituting a voltage value dependent on a selecting of predetermined power supply output voltages), and that does not teach any practical means to adjust that voltage, is to misunderstand the cited references.

Therefore, even if Fujishima's teachings could be theoretically combined with the prior art of Imagawa, his invention still fails to provide the missing element of "adjusting a reference voltage" that both Imagawa and Fujishima lack.

Further, Imagawa and Fujishima's individual inventions are each fully operational and

complete. Each functions in itself, so there is no good and logical reason to combine the inventions. As has been shown, both prior arts don't teach any "adjusting" of their respective predetermined reference voltages, because there is no valid reason why such adjusting is required. Neither the subject invention of Imagawa nor Fujishima would be improved by combining them, so no one skilled in these respective arts would have a logical reason to do so.

ITEM 7: The rejection of dependent claim 9 under 35 USC 103(a), is herein overcome first, by applicant's amendment to independent claim 6, upon which claim 9 is dependent, so that the subject claim is now in proper order for allowance and, second, by applicant's reasoned arguments which overcome the Office Action's allegations that the prior art anticipates claim 6.

In conclusion, the Office Action has not presented a convincing line of reasoning as to why the claimed subject matter as a whole, including its differences over the prior art, would have been obvious to those skilled in the art.

By the above affirmative arguments, as well as changes made in amending the claims so that they now more clearly and distinctly distinguish themselves over the prior art applicant has overcome the rejections under 35 USC § 103(a) for claims 6 and 9. Applicant submits that the subject claims are now in proper condition for allowance.

ALLOWABLE SUBJECT MATTER

Item 8: Applicant's affirmative arguments in Items 4-6 have overcome the rejection of independent claim 6, upon which cited claims 7 and 8 depend. The rejection of claims 6 is also overcome by applicant's amendment to claim 6, so that claims 7 and 8 are now allowable. The subject claims 7 and 8 are now in proper order for allowance.

All of the cited rejections in the claims have been duly corrected and/or affirmatively

argued and, therefore, the claims herein presented are now in proper order for allowance.

The currently amended and new claims herein submitted contain no new matter, and fall completely within the scope of the material set out in the originally filed documents.

GENERAL REMARKS

The claims submitted herein contain 5 (five) independent claims and 18 (eighteen) dependent claims. A fee of $725 is enclosed for excess claims.

This response is filed within the three month shortened statutory period indicated in the Office Action. No petition for an extension, or late fees, are required.

Please acknowledge receipt hereof by stamping and returning the enclosed return postcard.

Applicant is available by phone at (818) 340-7268, or fax at (818) 883-5706.

Enclosed:
- Transmittal Form
- Fee Transmittal Form
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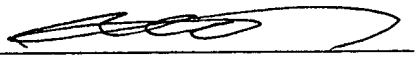
Respectfully submitted,



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IN THE DRAWINGS

Except as addressed below, the objections to the drawings cited in the Notice of Draftsperson's Patent Drawing Review are formal in nature and will be attended to in due course, preferably after receipt of a Notice of Allowance.

For the record, applicant has read the "Attachment for PTO-948 (Rev. 03/01, or earlier) 6/18/01" and understands the document to refer specifically to the new procedures regarding 18-month publication of applications. Since the original filing date of this application was 31 December 1999, applicant submits that the reference to 37 CFR 1.85(a) in the document to an "attached Office communication" does not apply to the subject Office Action.